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## Relationship between self-efficacy and life satisfaction according to exercise participation in obese female university students

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### Abstract

The aim of this study was to examine the relationship between self-efficacy and life satisfaction according to exercise participation in obese female university students. The sample of the study consisted of over 18 age 145 obese ( $BMI \geq 30$ ) that were regularly exercising for at least 4 days, 90 minutes in a week for 6 months and 136 obese sedentary ( $BMI \geq 30$ ). The mean age was ( $20.69 \pm 1.84$ ) for obese female students who participated regular exercise and ( $20.19 \pm 1.49$ ) for obese female university students who was sedentary. “General Self-Efficacy Scale” that originally developed by Sherer et al. (1982) and adapted to Turkish by Yıldırım and İlhan (2010) and “Life Satisfaction Scale” that originally developed by Diener et al. (1985) and adapted to Turkish by Yetim (1991) were used for measurement. For statistical analysis, The Kolmogorov-Smirnov test was used to determine whether the scores were normally distributed. Descriptive statistics, independent sample t test and pearson correlation analysis were also applied. There was statistically significant difference for the mean life satisfaction ( $t = 7.68, p < .05$ ) but there was no statistically significant difference for the mean self-efficacy ( $t = 1.17; p > .05$ ) between two groups according to the t test results. There was a significant positive correlation between life satisfaction and total self-efficacy scores ( $r = .551^{**}$ ). As a result, there was significant difference in life satisfaction between two groups. Obese female students with high self-efficacy perceptions may be aware of their abilities and thus rely on their abilities. In this case, it can be concluded that they are happy and generally enjoy life.

**Keywords:** Self-efficacy; life satisfaction; obesity; physical activity; BMI.

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## Introduction

Obesity has become a symbol of being strong and the sustainability of life in the first-century gods. Until today, throughout the history obesity has been perceived with different definitions. Sometimes it has expressed in words like power, force, domination, imposing and at sometimes it has commemorated with the number of births, fertility and abundance. Obesity is a disease with a permanent, progressive and increasing rate due to additional conditions and social problems (Bozbora, 2002). Obesity is a sign of health and wealth, spacious throughout history. However, nowadays, as the standard of living improves steadily, people have a sedentary and irregular lifestyle and obesity has become a growing health problem for all communities in the world. In all developed and developing countries, obesity is the first line of health problems (Güven, 2014). Obesity is also defined as the ratio of body height to body weight above normal references as a result of the body fat mass being much more than the fat-free mass. Under normal circumstances, in adult individuals; body weight is balanced between intake and expenditure of energy. Disorder in one or more of the physical, hormonal, chemical, and neural mechanisms that keep these levels in balance alters the body weight in the negative direction (Akbulut, 2010). There are three mechanisms that affect individuals' obesity levels, depending on immobility and eating habits. These are daily energy consumption, daily food consumption and rest metabolic levels. Avoiding sedentary lifestyles and maintaining healthy eating habits to protect from obesity are two of the most important implementations (Dietz & Gortmaker, 1985; Klesges, Shelton, Klesges, 1993). The prevalence of obesity has reached epidemic proportions over the last two to thirty years in both developed and developing countries, affecting almost every age, gender and socio-economic group. Obesity is associated with ongoing physical inactivity in the context of unhealthy weight gain (Bouchard, Blair, Haskell, 2007).

The self-efficacy belief affects which activities the person will participate in, the energy he will spend on an event, and the emotional response to waiting for or engaging in an event (Tokinan & Bilen, 2011). If individuals do not believe in themselves, they will think that they are inadequate even in environments where different opportunities are offered. Beliefs of self-efficacy are completed as a result of filtering, selection and evaluation of information from many different sources related to sufficiency. If a person's self-efficacy beliefs are firmly established, person will be stronger when faced with changes (Morgil, Seçken, & Yücel, 2004). Self-efficacy is based on the theoretical foundation of social learning theory developed by Bandura. Bandura first mentioned this concept in his article "Self-efficacy: Toward a unifying theory of behavioral change" published in 1977. Then, in 1986, he addressed the concept of self-efficacy together with the theory of social learning, and in 1997, he concluded in his book "Self-efficacy: The Exercises of Control" that other social learning factors, which regulate the self- personal and collective central theory (Pajeres, 1997). It is a 'strong self-efficacy' which is an element that affects people being happy and successful in different fields. People with this ability are very confident in their abilities, labor to be able to fulfill tasks that are difficult and challenging and keep their goals high and are trying to recover themselves even if they fail to achieve their goals (Toros, 2001). People who doubt their capacities do not want to take on tasks that are difficult and demanding, perceive these tasks as threatening and do not assume responsibility to reach their goals (Bandura, 1994). From philosophical point of view, it has been seen throughout history that the greatest and only motivation source of individual actions is the happiness. However, it is observed that psychologists are more concerned with unhappiness than they have neglected happiness. In recent times, behavioral scientists have recognized and corrected these mistakes and have started to work on happiness.

The concept of life satisfaction pioneered many researchers. In order to define this concept, firstly it is important to know the meaning of the concept of "satisfaction". "Satisfaction" is defined as meeting expectations, desires and wishes, and "Life Satisfaction" is defined as the outcome or situation that occurs when the expectations of the individual are compared with the ones that are in their possession. Life Satisfaction is not only the satisfaction of a single entity, but also the result of all experiences (Yıldız, 1979). The rapid change that urbanism, industrialization and technological developments have brought together today, is driving people to be alone and alienated, while at the same time experiencing the anxiety of doing what they need to do in their daily life, building relationships with other people and running a healthy life. Often unpleasant emotions can lead to physical distress or obesity and make life difficult. For this reason, difficult life increases obesity and negative emotion; it has been observed that self-efficacy beliefs such as achieving something, being able to accomplish something, and life satisfaction gradually decrease, especially in fatty and obese individuals. Obesity is a global problem with a high rate of spread. It is known that obesity is more prevalent among women, especially among university students. Especially when obese college women are examined; health, aesthetics, and the weakness of the study work and as a result, obese university students who do not exercise are thought to have less self-efficacy and life satisfaction than obese university students who exercise.

Based on this information, this research was conducted in order to examine the relationship between self-efficacy and life satisfaction in obese female university students according to exercise participation. It is thought that this research will contribute to the literature on the levels of self-efficacy and life satisfaction related to obesity.

## Method

For the purpose of the research, the descriptive survey model has been used which is used to reveal the current situation. This research is a descriptive, relational and comparative study.

### Research Group

The sample of the study consisted of over 18 age 145 obese ( $BMI \geq 30$ ) that were regularly exercising for at least 4 days, 90 minutes in a week for 6 months and 136 obese sedentary ( $BMI \geq 30$ ) voluntary female university students at Mersin University, Toros University, Çağ University and Çukurova University. The mean age was ( $20.69 \pm 1.84$ ) for obese female students who participated regular exercise and ( $20.19 \pm 1.49$ ) for obese female university students who were sedentary. Participants signed informed consent prior to the study. They gave their informed constant for the experimental procedure as required by the Helsinki declaration. And also, the Mersin University Scientific Ethics Committee (28/03/2018-007) approved this study. The researcher has informed participants of necessary disclosures to protect the confidentiality of information obtained from the research. "Personal Information Form" was used by the researcher to identify demographic information such as age, height, weight and working status of the participants.

### Data Collection Tools

#### General Self-Efficacy Scale

In order to determine the self-efficacy of participants "General Self-Efficacy Scale" that originally developed by Sherer et al. (1982) and adapted to Turkish by Yıldırım and İlhan (2010) was used. The scale consists of 17 items. The scale is formed in a five-point Likert form with responses ranging from "no" to "very good" categories and has three sub-dimensions (start, not failed and sustained effort). The inversely scoring factors of the scale are 2, 4, 5, 6, 7, 10, 11, 12, 14, 16 and 17. The lowest score that can be taken from the scale is 17 and the highest score is 85. A high score

indicates a high self-efficacy level. The Cronbach Alpha reliability value of the scale is .80 (Yıldırım and İlhan, 2010).

### **Life Satisfaction Scale**

In order to determine life satisfaction of participants "Life Satisfaction Scale" that originally developed by Diener et al. (1985) and adapted to Turkish by Yetim (1991) were used for measurement. This scale is a measure of 5-item containing answers ranging from "I do not agree at all" to "I fully agree" (Diener et.al., 1985). The scores obtained from each item on the scale range from 1 to 7, while the total score ranges from 5 to 35. As the score from the scale increases it indicates that life satisfaction will rise. Turkish validity and reliability studies of the scale were made by Köker (1991) and Yetim (1993). The Cronbach Alpha reliability value of the scale is .86 (Yetim, 1993).

### **Statistical Analysis**

In data analysis, firstly normality test was performed. Since the number of samples is greater than 50, the Kolmogorov-Smirnov Normality Test is considered, and it is observed that the distribution is normal ( $p > .05$ ). Subsequently, to determine whether life satisfaction and self-efficacy perceptions differ according to the exercise participation, the independent sample t test was used. In addition, descriptive statistics and Pearson correlation analysis were applied. SPSS package program was used for the analysis of the data obtained in the study.

## **Results**

**Table 1.** General Self-Efficacy Scale Independent Samples t Test Results

Groups		n	$\bar{x}$	d	$Sh_{\bar{x}}$	t tests		
						T	Sd	p
General Self-Efficacy Scale	Obese female with exercise	145	57.04	11.56	1.29	1.17	279	.19
	Obese female without exercise	136	55.35	11.78	1.46			

There was no statistically significant difference between the self-efficacy of university students who participated regular exercise and those who did not ( $t = 1.17$ ;  $p > .05$ ).

**Table 2.** Life Satisfaction Scale Independent Samples t Test Results

Groups		n	$\bar{x}$	Sd	$Sh_{\bar{x}}$	t tests		
						T	Sd	p
Life Satisfaction Scale	Obese female with exercise	145	24.17	5.81	0.67	7.68	279	.000
	Obese female without exercise	136	15.39	6.09	0.84			

There was statistically significant difference between the life satisfaction of university students who participated regular exercise and those who did not ( $t=7.68$ ;  $p < .05$ ). This difference is in favor of university students who participate regular exercise.

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**Table 3.** Pearson Correlation Analysis Results between Self-Efficacy and Life Satisfaction

Variable	n	r	p
Self-Efficacy Life Satisfaction	281	.551**	.000

There was a moderately significant positive correlation between life satisfaction and total self-efficacy scores of university obese female students according to exercise participation ( $r=551^{**}$ ).

### Discussion and Conclusions

This research was conducted in order to examine the relationship between self-efficacy and life satisfaction in obese university students according to exercise participation. There was no statistically significant difference for the self-efficacy between two groups. However, when the average self-efficacy score is taken into consideration, the average score of obese university students who participate exercise is higher than the other group. This may be due to their higher belief in their ability to succeed.

Roach et al. (2003) reported that when self-efficacy increases in young obese adults, eating habits improve and weight gain increases. This study does not support our research results.

Boudreaux et al. (2003) have suggested that self-efficacy plays an important role in enhancing the motivation needed to change behaviors such as occupation of physical activity. In the study conducted by O'Dea & Wilson (2006), self-efficacy was found to be positively correlated with BMI. Edell et al. (1987) found a relationship between weight loss and self-efficacy. Pinto et al. (1999) conducted an experimental study and found that the 12-week weight control program had a positive effect on self-efficacy for exercise and health parameters when changing participants' weights. Trost et al. (2001) found that self-efficacy of obese children was lower than that of non-obese children. Although the literature is closer to our study findings does not support our research result.

There was statistically significant difference for the mean life satisfaction between obese university students who participated and did not participate exercise. This difference was in favor of exercise group. It was observed that the mean life satisfaction scores of obese students that participate exercise were higher. Obese female students who participate exercise may have reached such a finding because they like life more and they care more about themselves. A significant difference was found in the study of Değirmenci (2006) for life satisfaction scale. The mean score of obese individuals was lower than the normal individuals.

This result shows that the quality of life of obese individuals is adversely affected. Similarly, in our study the life satisfaction scores of obese female students who participate exercise were found higher.

Genç et al. (2011) investigated the relationship between physical activity and quality of life in a study of 710 young adults, and found that when participation in physical activity increased, life satisfaction reached as its conclusion. In our study, life satisfaction scores of obese female students who participated exercise also were higher than the other group. It can also be concluded that exercise has a positive effect on life satisfaction. In another study on obese adults, Jepsen et al. (2015) concluded that physical activity in obese adults is also positively associated with quality of life. This study supports the findings of our study. In another study Budiana and Arif (2017) conducted a study on children and reported that obesity is a major problem on the quality of life and life satisfaction. As a result of this study, it is concluded that physical activity and nutrition education have positive results in the group and life satisfaction is more positive with obese children who are physically active. These findings support our study.



There was a significant positive relationship between life satisfaction and total self-efficacy scores of obese female students in our study. This relationship was moderate. As life satisfaction increases, self-efficacy increases. The reason for this can be that obese female students with higher life satisfaction and self-efficacy may be thought that they see themselves adequately and thus they can participate in a wider variety of physical activities. In addition, obese female students with high self-efficacy perceptions may be aware of their abilities and thus rely on their abilities. In this case, it can be said that they generally enjoy life and are happy. Toros and Savař (2006) have concluded that exercise participation contributes to life satisfaction. Although there are many studies on obese women in psychology, there is no scale developed on university students for obesity. For this reason, it may be considered to carry out a scale development study on university students for obesity in the future.

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